

***Claims:***

- 1           1.       An electronic device comprising:  
2           a sigma delta modulation loop circuit for use in a device having a radio frequency  
3 receiver, wherein the loop is configured to compensate for noise that is generated by the  
4 sigma delta loop and that affects radio signals within the range of a radio frequency band  
5 according to the operating frequency of the radio frequency tuner.
  
- 1           2.       An electronic device according to Claim 1 wherein that compensation is the  
2 placement of a Noise Transfer Function zero at the operating frequency of the radio frequency  
3 tuner.
  
- 1           3.       An electronic device according to Claim 2, wherein the sigma delta modula-  
2 tion loop further includes logic configured to adjust its noise transfer function of the loop in  
3 response to a change in the operating frequency of the radio receiver such that the noise  
4 generated by the sigma delta loop that affects signals received by the radio receiver are  
5 compensated for by the sigma delta modulator loop.